Programming for Data Science

How to create a package in R

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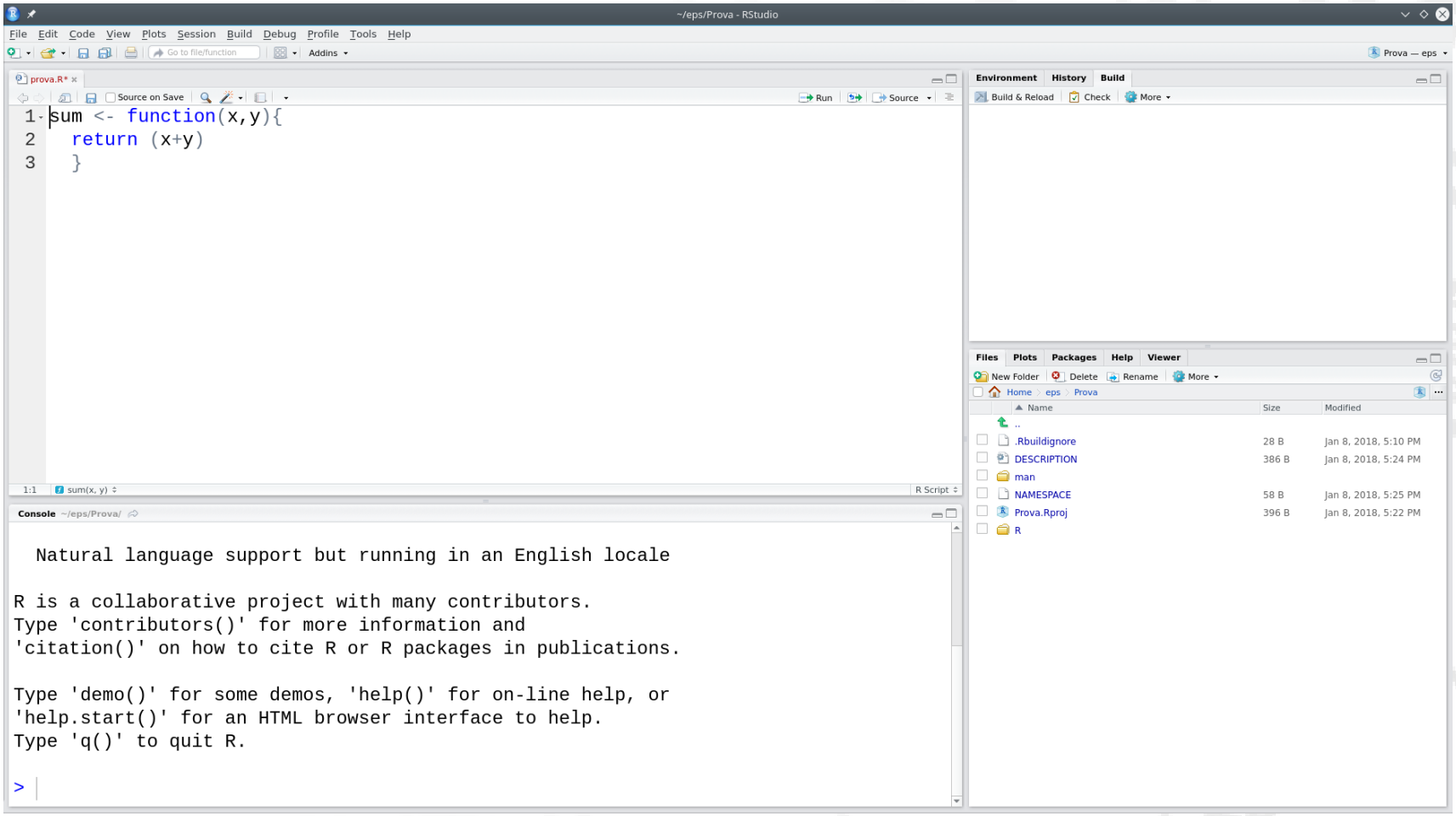
How to create a R package

- we describe how to create an R package using RStudio;
- Obviously it is possible to build R Packages with Command Line Tools, but RStudio has built-in tools that will make easier this task;
- the **devtools** package must be installed in RStudio.

  >install.packages("devtools")

How to create a R package

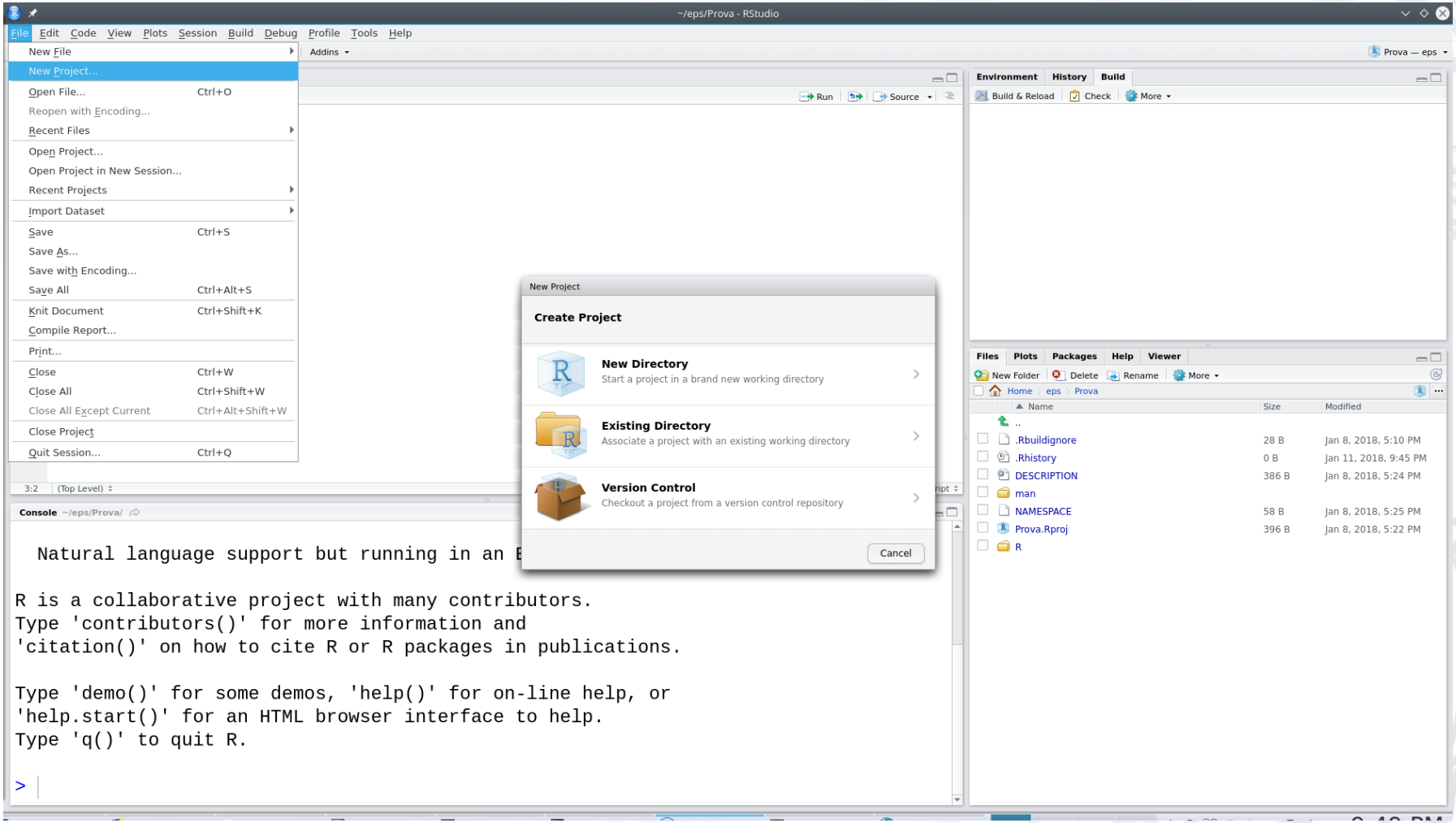
- Open a new .R file;



- Write the code for your functions in this .R file. You can create one file with all of your functions or create separate files for each function. Save these files somewhere where you can easily find them.

How to create a R package

- Open a new project in RStudio. Go to the **File** menu and click on **New Project**. Then select **New Directory**, and **R Package** to create a new R package.



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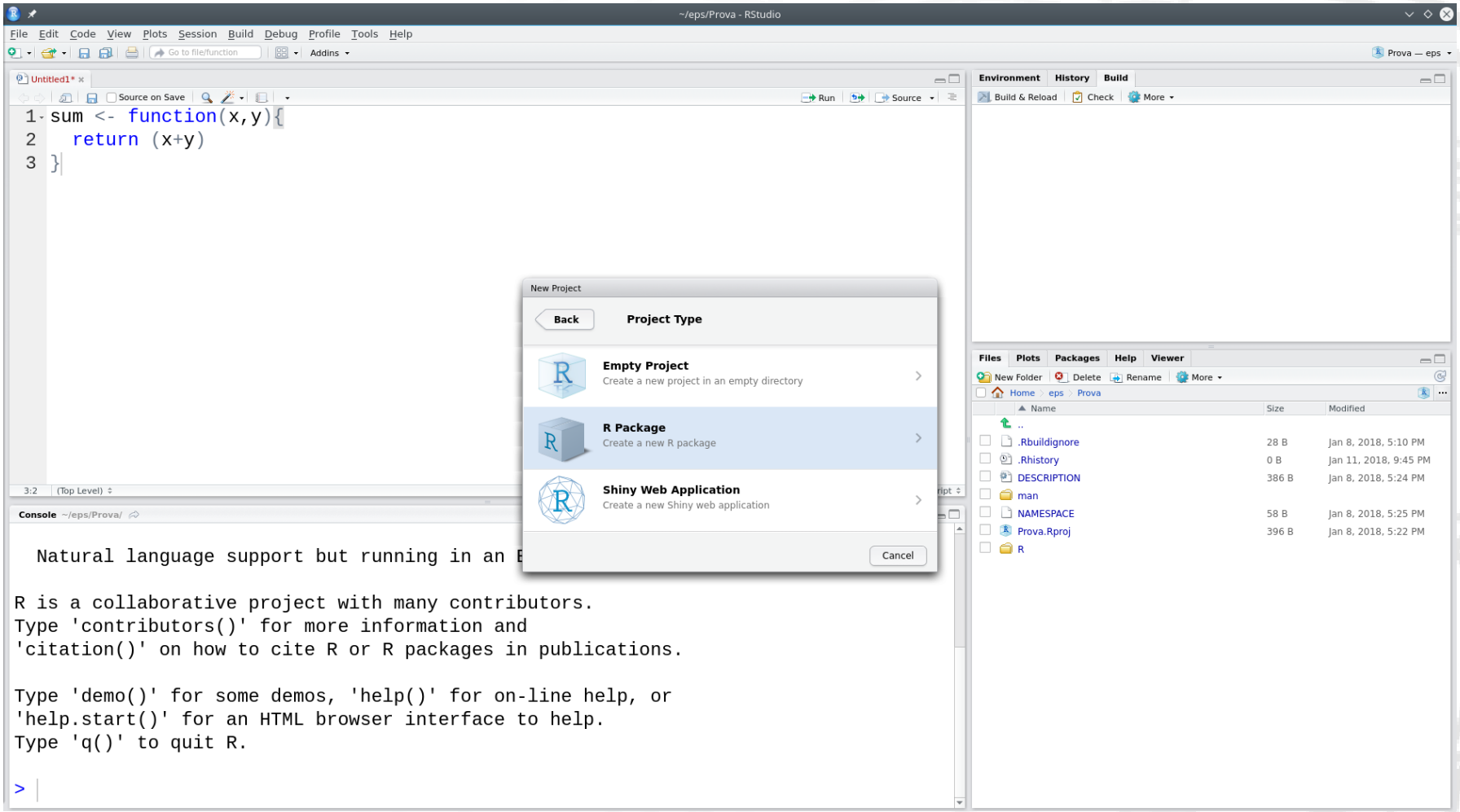
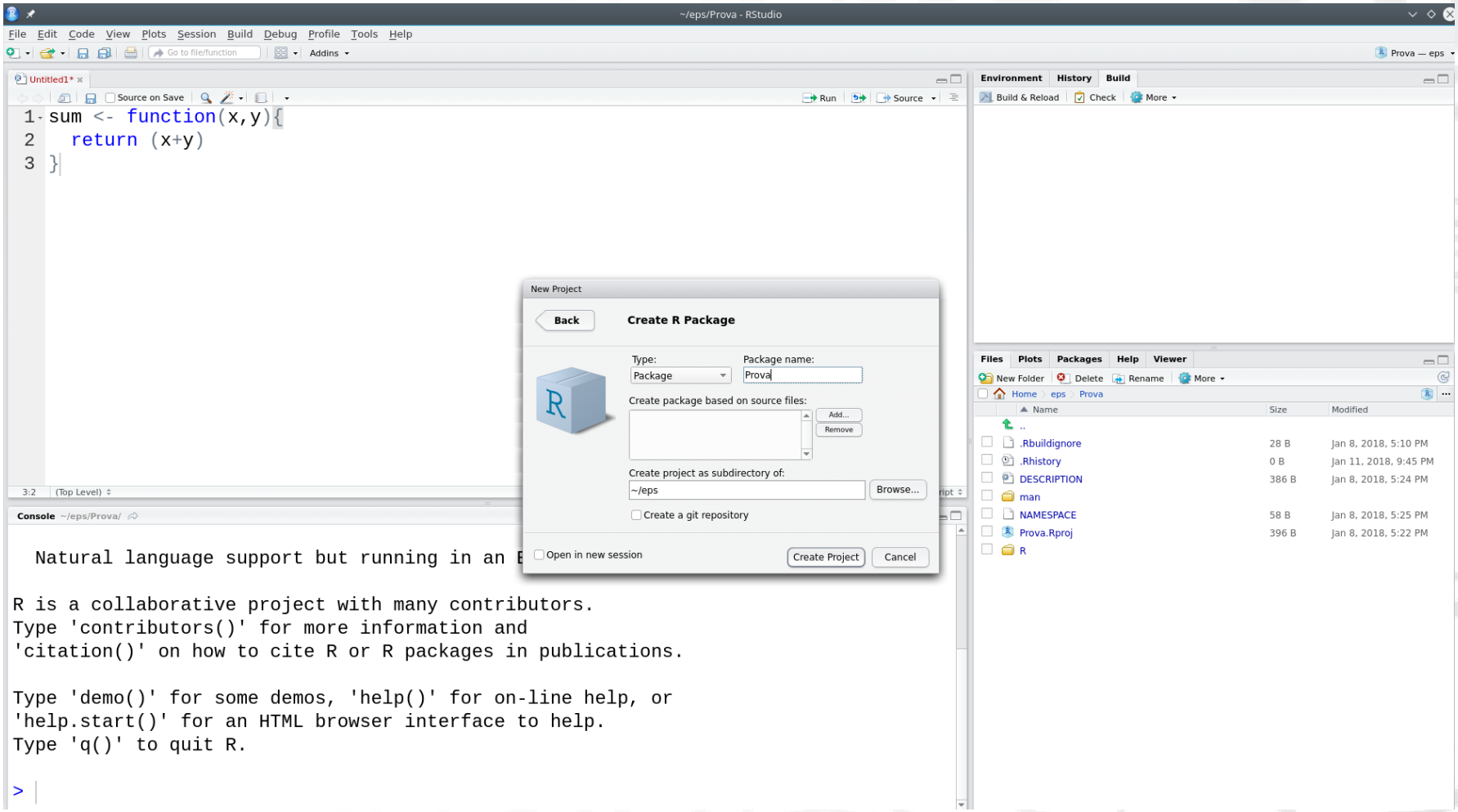


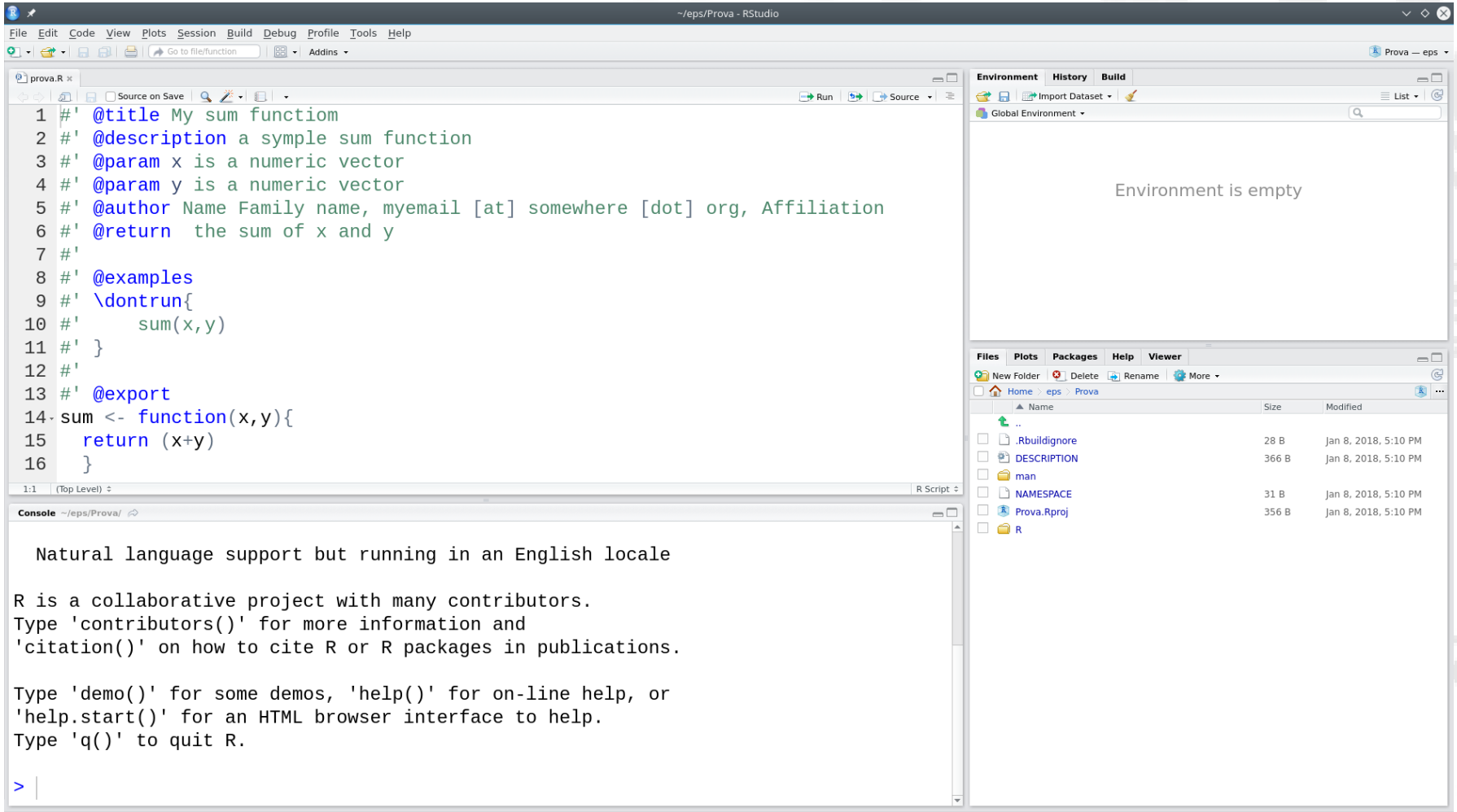
How to create a R package

- Type the name of your package, then upload the .R file you created in step 1 under **Create package based on source files**. Click **Create project**.



How to create a R package

- Documentation can be automatically created using **roxygen2** package.



>install.packages("roxygen2")

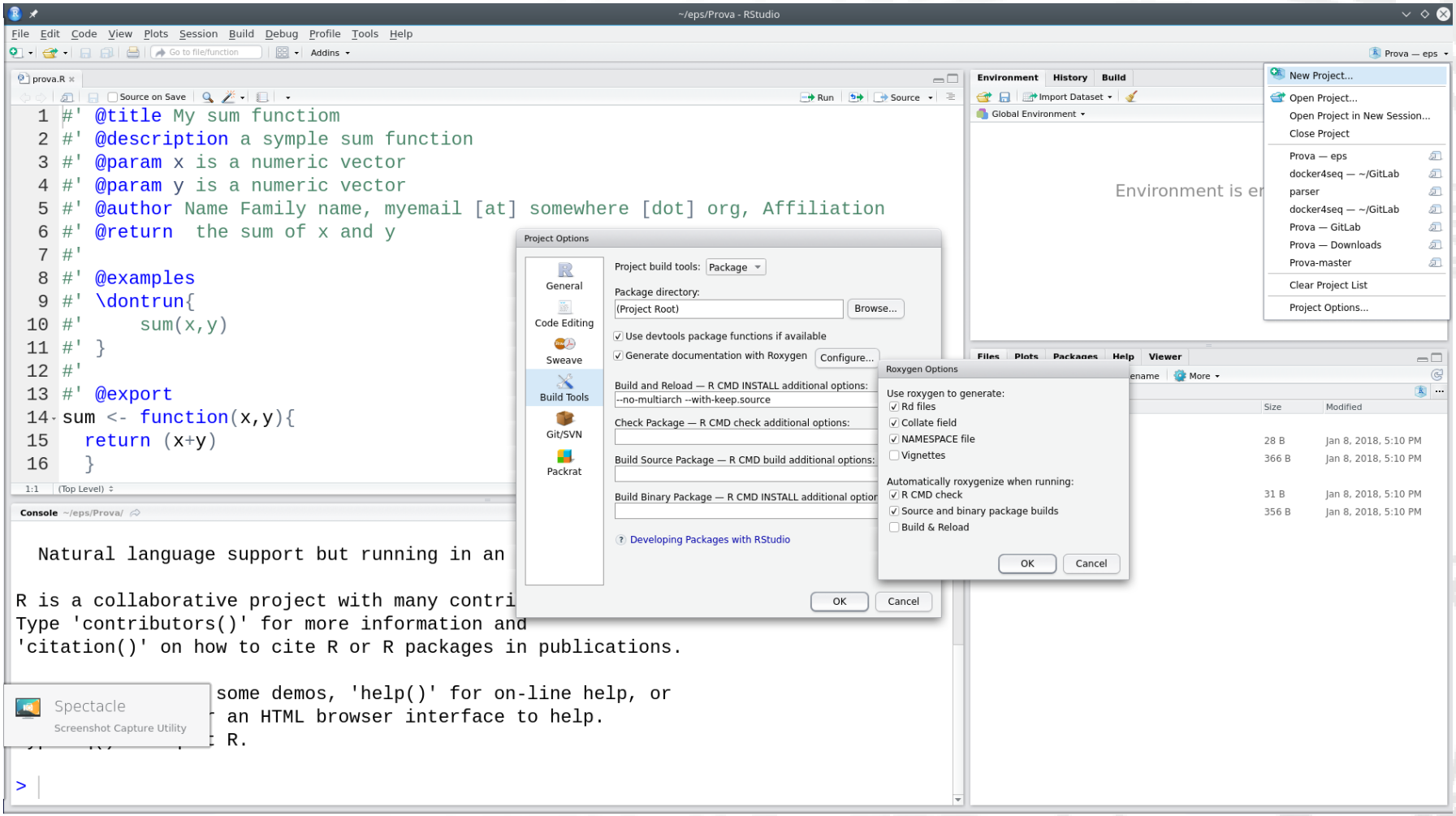
How to create a R package

- The functions must be commented using the following tags:

```
#' @title My sum functiom
#' @description a symple sum function
#' @param x is a numeric vector
#' @param y is a numeric vector
#' @author Name Family name, myemail [at] somewhere [dot] org, Affiliatio
#' @return  the sum of x and y
#'
#' @examples
#' \dontrun{
#'     sum(x,y)
#' }
#'
#' @export
sum <- function(x,y){
  return (x+y)
  }
```

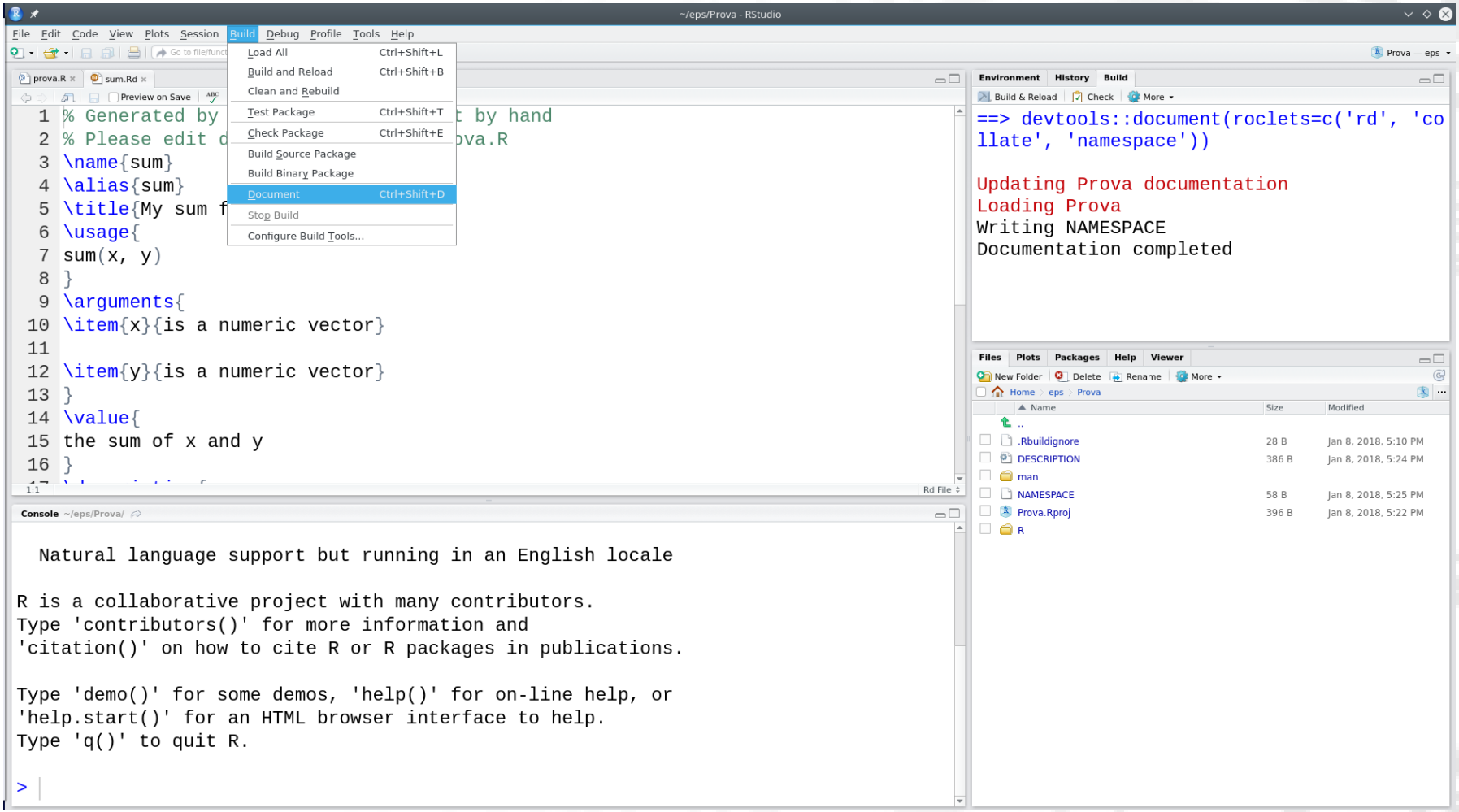
How to create a R package

- To enable the generation of package documentation using **roxygen2**



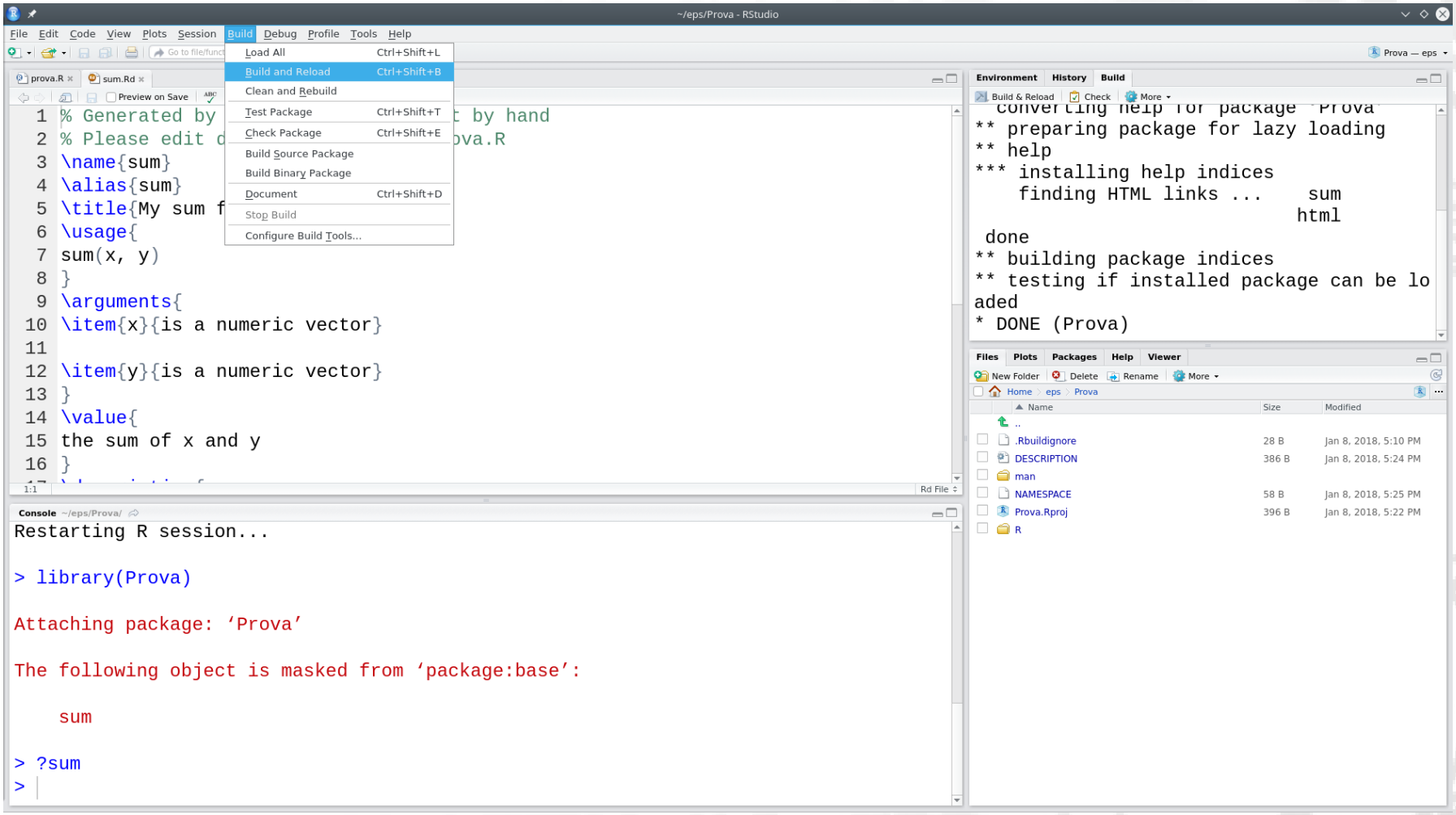
How to create a R package

- Documentation is generated by clicking on **Build→ Documentation**



How to create a R package

- Package can be built and loaded by clicking on **Build→ Build and Reload**



How to create a R package

- Package can be built and loaded by clicking on **Build→ Build and Reload**